Poisonous Plants of Bayad Taluka, District Aravalli (Gujarat) India

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Abstract- *In this present work, a brief account of poisonous plants of Bayad Taluka, district Aravalli (Gujarat) have been given. Total 32 poisonous plant species belonging to 25 genera and 18 families. In this research paper poisonous plants are arranged alphabetically in their scientific name followed by family's name, local name and poisonous part.*

Keywords- Bayad Taluka, Poisonous plants.

I. INTRODUCTION

Poisonous plants are plants that produce toxins that deter herbivores from consuming them. Plants cannot move to escape their predators, so they must have other means of protecting themselves from herbivorous animals. Some plants have physical defenses such as thorns, spines and prickles, but by far the most common type of protection is chemical. Over millennia, through the process of natural selection, plants have evolved the means to produce a vast and complicated array of chemical compounds in order to deter herbivores. Tannin, for example, is a defensive compound that emerged relatively early in the evolutionary history of plants, Many of the known plant defense compounds primarily defend against consumption by insects, though other animals, including humans, that consume such plants may also experience negative effects, ranging from mild discomfort to death. Many of these poisonous compounds also have important medicinal benefits the varieties of phytochemical defenses in plants are so numerous that many questions about them remain unanswered. There are some poisonous plants that occur in this region. People of this region where not able to identify that which plants are poisonous. Particularly children's are prone to be victimized by eating poisonous plants accidently. The poisonous parts may be root, latex, bark, seeds or even whole plant (Chopra (1949), Chopra,et al. (1965) and Fowler(1980). The floristic and ethno botanical studies of Gujarat state have been carried out by Thaker (1910), Saxton and Sedgwick (1918), Nadkarni (1926), Santapau (1954), Patel (1971), Shah (1978), Jain (1991). Dastur (1996). Shashtri (1996), Punjani (1997), Patel (2001), Bhatt, et al. (2003) and Jangid (2005), who studied only to the systematic part of the available plant species, In the present work we have tried to identify the part of plant which are poisonous and are of deep concern to the human being.

II. STUDY AREA

The Bayad Taluka is situated on 23° 2220'N latitude and 73° 2173'E longitude. The region of Bayad is flat and consists of mostly sandy plains, although north and north eastern parts near Bayad are covered by the range of Arvalli hills. **Total area of Bayad** is 590 km² including 559.24 km² rural **area** and 31.15 km² urban **area**.

III. MATERIALS AND METHODS

The Poisonous plants will be collected from the various villages and area including hills and hillocks of the Bayad taluka forest ranges. A good number of trips will be arranged in accordance with the different seasons throughout the whole year. The fully grown plants will be collected during the monsoon and in the later part of the rainy season. The collected plants will be brought to the laboratory, identified and classified to their respective species level with the help of flora (Bhandari, 1978, Cook, 1903-1908, Shah, 1978 and Sutaria, 1941). The plants specimens were collecting in form of photographs. The information of plants will collected by means of arranging meeting, dialogues and discussion with rural, tribal and knowledgeable people from various villages of Bayad Taluka. Poisonous plants have been arranged alphabetically in table.No.1

IV. OBSERVATION AND DISCUSSION

There are several poisonous plants as far as the plant communities are concerned of which 32 species occur in Bayad taluka only those include some plants which are deadly poisonous. The information about the poisonous plants was really helpful to us through which we can take some precautions. It is proposed to develop some technique for the tribal and rural people through whom we can give the demonstration after having a meeting so that the people are aware of poisonous plants. It was observed that some of these particular plants are not even grazed by the cattlels. However, some of these poisonous plants as *Abrus, Calotropis, Datura*,

Euphorbia, Nicotiana, Ricinus, Passiflora, Plumbago and *Gloriosa* have been used for therapeutically uses since Vedic period. Sometime in normal talk the people are using the word that they are no giving the time. But if we think in plant world and look at the nature and if we keep constant than and then only we would have good result.

V. CONCLUSION

The paper deals with 32 poisonous plants are belonging to 18 different families. The poisonous parts of majority of plants species were seed, latex and root and root bark. Besides these, poisonous parts of some plants were fruits, stem bark, and sometimes whole plant also. Some plants causes poisoning to both human beings as well as livestock population, while some causes poisoning to human being only. The poisonous nature of plant or plant part depends mainly on quantity consumed. In small quantity, plant shows their therapeutic value while in higher quantity, shows their poisonous effects.

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REFERENCES

[1] Cook, T. (1908): The flora of the presidency of the Bombay, Vol. I and II, Bishan SinghMahindra Pal Singh, Dehradun.
[2] Thaker, J.I. (1910): Vanaspati shastra, (Flora of Bardahill) Reprint, Pravin Pustak, Bhandar, Rajkot.
[3] Saxton, W.T. and Sedgwick, L.J. (1918): Plants of Northern Gujarat, Ibid. 6 (7): 209-326 and I - Xiii.
[4] Nadkarni, K.M. (1926): Indian Materia Medica, Vol. I and II, Popular Prakashan. Ltd.
Mumbai.
[5] Sutaria, R.N. (1941): The vegetation of Vireshwar flora of the Gujarat state, Natural History
Society.
[6] Chopra,R N.et al.(1949): Poisonous plants of India, Calcutta.C.S.LR.(1948-1976).Wealth of India(Raw materials).1-10, New Delhi.
[7] Dastur, J.F. (1952): Useful plants of India and Pakistan, D.B. Taraporewala Sons and Co.Ltd., Bombay.
[8] Santapau, H. (1954): Contribution to the botany of Dangs forest in Gujarat. Guj. Res. Soc. 16:
204-320 and 17:1-59.
[9] Chopra,R N.,R.L.Badhwar and S.Ghosh(1965): Leguminosae, In:Kurup, C.R.R.(Ed.).Poisonous plant of India. Vol.I. ICAR, New Delhi.
[10] Patel, R.I. (1971): Forest Flora of Gujaral State Published by Gujarat State Forest Department, Gujarat state, Baroda.
[11] Bhandari, M.M. (1978): Flora of the India Desert, Scientific publisher, Jodhpur, Rajasthan.
[12] Bhatt, D.C., Mitaliya, K.D. Jangid, M.S., Lashkari, P.L. and Patel, Y.M. (2003): Observation
on traditional herbal remedies for asthma in Gujarat. Ad. Plant sci. 16(11) 385-387.
[13] Shah, G.L. (1978): Flora of Gujarat State. Part I and II, Sardar Patel University. Vallabh Vidhyanagar.
[14] Fowler.M.E.(1980): Plant Poisoning in Small Companion Animals, Ralston Purina Co., St.Louis, MO.
[15] Jain, S.K.(1991): Dictionary of Indian Folk Medicine and Ethnobotary, Deep Publication, Delhi.
[16] Shashtri, S.D. (1996): Aryabhishak. Hindustan no Vaidraj." Sastu Sahitya Vardhak
Karyalay Ahmedabad and Mumbai.
[17] Punjani, B.L. (1997): An Ethnobotanical study of tribal areas of district S.K. (N.G.). Ph.D. Thesis, H.N.G.Uni, Patan.
[18] Patel. N.K. (2001). Study of angiospermic plants with relation to phytosociological and Ethnobotanical study of Danta taluka, Dist. B.K., Ph.D.thesis. H.N.G.Uni, Patan.
[19] Bhatt,D.C.,Mitaliya, K.D.,Jangid,M.S.,Lashkari, P.I.and Patel, Y.M. (2003):Observation on herbal remedies for asthama in Gujarat.Ad.Plant sci.16(II)385-387.
[20] Jangid, M.S. (2005): Texoethnobotanical studies of angiosperms of Bayad taluka, dist, S.K. (N.G.). Ph.D. thesis, H.N.G.Uni, Patan.
[21] Katewa SS & Galav PK, Addition to Traditional folk herbal medicines from Shekhawati region of Rajasthan,Indian J Traditional knowledge,5(4) 2006 494-500.
[22] Lal HS,Mishra PK Gloriosa superba – an endangered plant spotted for the first time from forest of Tpchanchi,Hazaribag(Jharkhand) India.2011.

Table: 1 Poisonous Plants of Bayad Taluka

NO.	SCIENTIFIC NAME	LOCAL NAME	FAMILY	PART
1	*Abrus precatorius* L.	Chanothi	Fabaceae	Seed coat
2	*Alangium salvifolium*(L.f.) Wang	Ankol	Alangiaceae	Root bark
3	*Allamenda cathartica* L.	-	Apocynaceae	Stem bark
4	*Annona squmosa* L.	Sitafal	Annonaceae	Seeds
5	*Argemone mexicana* L.	Darudi	Papaveraceae	Seeds
6	*Calotropis gigantia* (L.) R.Br	Motoakdo	Asclepiadaceae	Latex
7	*Calotropis procera* (Ait.) Ait.f.	Nonoakdo	Asclepiadaceae	Latex
8	*Carica papaya* L.	Papayu	Caricaceae	Seeds
9	*Catharanthes pusillus* (Murr.)G.Don	Barmasi	Apocynaceae	Seeds&Latex
10	*Citrullus colocynthis* (L.)	Indrayan	Cucurbitaceae	Fruit
11	*Cryptostegia grandiflora* R.Br	Rubber vel	Periplocaceae	Whole plant
12	*Datura innoxia* Mill.	Dhaturo	Solonaceae	Whole plant
13	*Datura metal* L.	Dhaturo	Solonaceae	Whole plant
14	*Euphorbia antiquorum* L.	Tridharo thor	Euphorbiaceae	Latex
15	*Euphorbia hirta L*inn.	Bada dudhi	Euphorbiaceae	Flower & Root
16	*Euphorbia nerifolia* L.	Thor	Euphorbiaceae	Latex
17	*Euphorbia nivulia* Buch Ham.	Thor	Euphorbiaceae	Latex
18	*Euphorbia tirucalli* L.	Vad thor	Euphorbiaceae	Latex
19	*Gloriosa superba* L.	Kankasani	Liliaceae	Root
20	*Ipomoea fistulosa* (Mart.) Austin	Nafft vel	Convolvulaceae	Whole plant
21	*Jatropha curcas* L.	Ratanjot	Euphorbiaceae	Latex&Seed
22	*Jatropha gossypifolia* L.	Vilayati nepalo	Euphorbiaceae	Latex&Seed
23	*Luffa echinata* Roxb.	Kukad vel	Cucurbitaceae	Fruit
24	*Melia azedarach* L.	Bakam limbo	Meliaceae	Seeds
25	*Nerium indicum* Mill.	Karen	Apocynaceae	Whole plant
26	*Nicotiana taacum* L.	Tambaku	Solanaceae	Leaves
27	*Parthenium hysterophorous* L.	Congress grass	Asteraceae	Whole plant
28	*Passiflora foetida* L.	Krishana kamal	Passifloraceae	Fruit
29	*Plumbago zeylanica* L.	Chitrak	Plumbaginaceae	Root
30	*Pedilanthus tithymaaloides (L.)*Poir	Vilayati kharsani	Euphorbiaceae	Latex & root
31	*Peltophorum pterocarppum (DC.)B.*	Tamrafali	Caesalpinaceae	Flowers
32	*Ricinus communis L.*	Arendi	Euphorbiaceae	Leaf

Some Photos of Poisonous Plants

Fig.1 *Datura metal* L.

Fig.2 *Gloriosa superba* L.

Fig.3 *Parthenium hysterophorous* L.

Fig.4 *Carica papaya* L.

Fig.5 *Calotropis procera* (Ait.) Ait.f.

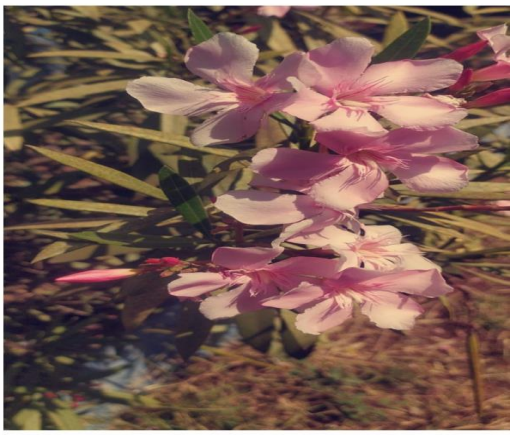

Fig.6 *Nerium indicum* Mill.